SLOVENSKI STANDARD
SIST EN 6097:2019

01-julij-2019

Aeronavtika - Zglobni drsni ležaj, kovina na kovino, z zelo velikim notranjim obročem iz korozijsko odpornega jekla - Mere in obremenitve - Palčne mere

Aerospace series - Bearing, spherical plain, metal to metal, extra wide inner ring in corrosion resisting steel - Dimensions and loads - Inch series

Luft- und Raumfahrt - Gelenklager, Metall auf Metall, extra breiter Innenring aus korrosionsbeständigem Stahl - Maße und Belastungen, Inch Reihe

Série aérospatiale - Rotule métal à métal en acier résistant à la corrosion, avec bague intérieure extra large - Dimensions et charges - Séries en inches

Ta slovenski standard je istoveten z: **EN 6097:2019**

ICS:

21.100.10	Drsni ležaji	Plain bearings
49.035	Sestavni deli za letalsko in vesoljsko gradnjo	Components for aerospace construction

SIST EN 6097:2019 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 6097

May 2019

ICS 49.035

English Version

Aerospace series - Bearing, spherical plain, metal to metal, extra wide inner ring in corrosion resisting steel - Dimensions and loads - Inch series

Série aérospatiale - Rotule lisse, métal à métal, bague intérieure extra large en acier résistant à la corrosion - Dimensions et charges - Séries en inches

Luft- und Raumfahrt - Gelenklager, Metall auf Metall, extra breiter Innenring aus korrosionsbeständigem Stahl - Maße und Belastungen, Inch-Reihe

This European Standard was approved by CEN on 5 November 2018.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN 6097:2019 E

Contents

Page

European foreword

This document (EN 6097:2019) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2019, and conflicting national standards shall be withdrawn at the latest by November 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This document is published at edition P2. Former P1 and drafts may exist of Airbus development only but without any ASD-STAN official publication. In consequence configuration management discrepancies with these unofficial documents are under Airbus responsibility.

1 Scope

This European standard specifies the characteristics of inch based spherical plain bearings, metal to metal, in corrosion resisting steel, extra wide inner ring inch series.

They are intended for use in fixed or moving parts of the aircraft structure and their control mechanisms.

The slide hole treatment either at the outer ring or inner ring.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 2030, *Aerospace series — Steel X105CrMo17 (1.3544) — Hardened and tempered — Bars — $D_e \leq 150$ mm*

EN 2133, *Aerospace series — Cadmium plating of steels with specified tensile strength ≤1 450 MPa, copper, copper alloys and nickel alloys*

EN 2337, *Aerospace series — Spherical plain bearings — Technical Specification*

EN 2424, *Aerospace series — Marking of aerospace products*

EN 3161, *Aerospace series — Steel FE-PM3801 (X5CrNiCu17-4) — Air melted, solution treated and precipitation treated, bar a or $D \leq 200$ mm, $R_m \geq 930$ MPa*

ISO 1132-1, *Rolling bearings — Tolerances — Part 1: Terms and definitions*

ISO 8075, *Aerospace — Surface treatment of hardenable stainless steel parts*

MIL-PRF-23827, *Grease, aircraft and instrument, gear and actuator screw, NATO code No.G-354 metric*[1]

MIL-PRF-46010, *Lubricant, solid film, heat cured, corrosion — inhibiting, NATO Code-S-1738*[1]

MIL-PRF-81322, *Grease, aircraft, general purpose, wide temperature range, NATO Code G-395*[1]

TR 4475, *Aerospace series — Bearings and mechanical transmissions for airframe applications — Vocabulary*[2]

1 Published by: Department of Defense (DoD), the Pentagon, Washington, D.C., 20307, USA.

2 Published as ASD-STAN Technical Report at the date of publication of this European standard by AeroSpace and Defence industries Association of Europe – Standardization (ASD-STAN) (see www.asd-stan.org).

3 Terms, definitions and symbols

For the purposes of this document, the terms and definitions given in TR 4475 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at http://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

Symbols of limit deviations are in accordance with definitions of ISO 1132-1.

α maximum angle of tilt of the outer ring with respect to the inner ring, with the spherical surface of the outer ring being completely in contact with the inner ring

C_a permissible static axial load

C_s permissible static radial load

Δ_{dmp} single plane mean bore diameter deviation

Δ_{Dmp} single plane mean outside diameter deviation

Δ_{ds} deviation of a single bore diameter

Δ_{Ds} deviation of a single outside diameter

4 Requirements

4.1 Configuration, dimensions, tolerances and mass

Configuration, dimensions, tolerances and mass shall be according to Figure 1 to Figure 5 and Table 1.

Table 1 and Table 3: Dimensions and tolerances are expressed in millimeters (inches).

Figure 1 and Figure 2: Dimensions and tolerances for Ra max. are expressed in µm (µin).

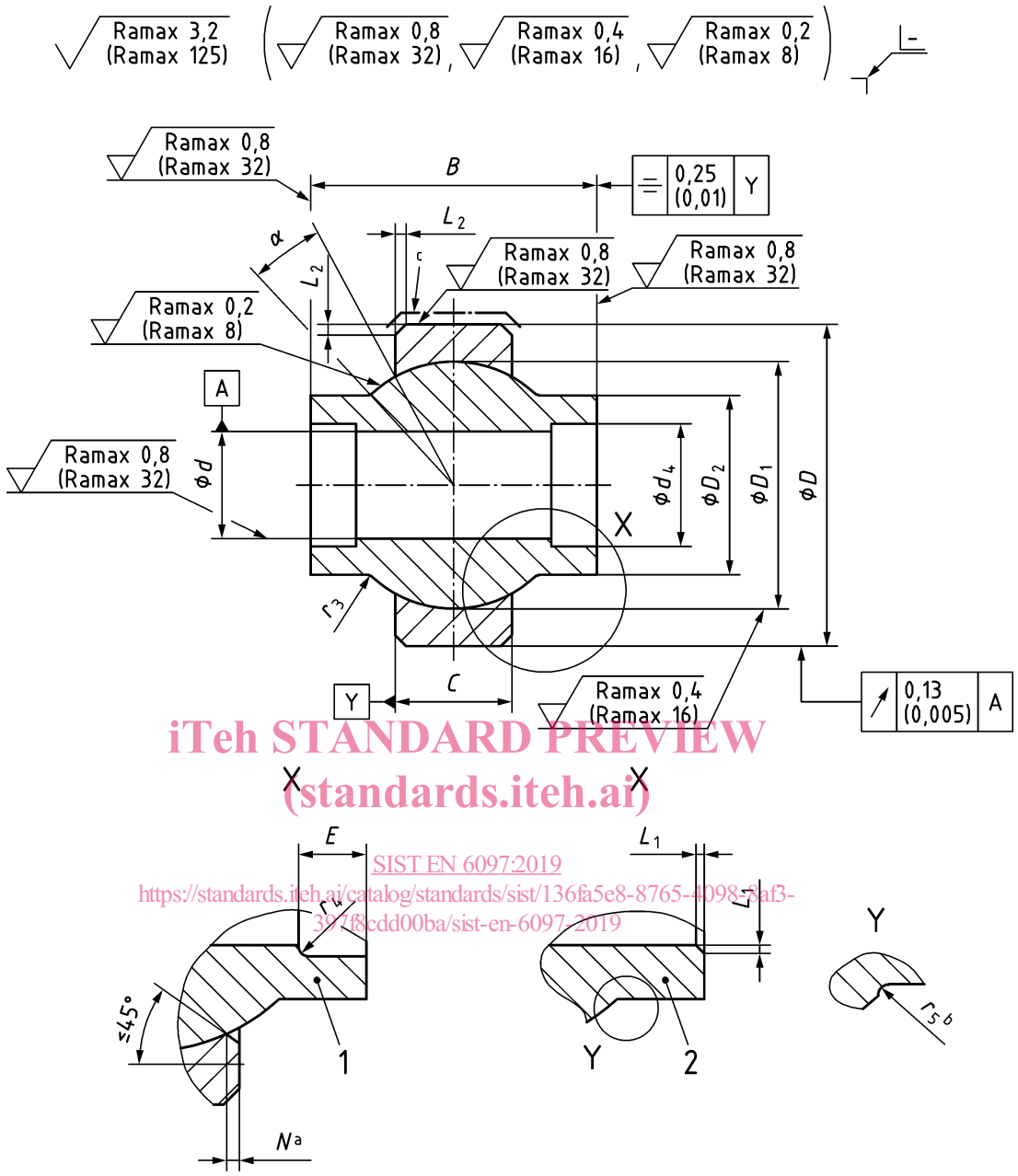
Values apply after to surface treatment.

4.2 Surface roughness

Surface roughness shall be according to Figure 1 and Figure 2.

Values in micrometer (micro inches), apply prior to surface treatment.

Surface roughness is measured before surface treatment.



Key

1 type code D

2 type code E

a set-back

b optional form to permit grinding undercut

c cadmium plated

Figure 1 — Code S — without swaging grooves